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LETTER TO THE EDITOR

Reply to the editorial comment from Van der Wall concerning 'The right ventricle: always normal in normal subjects?'

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To the Editor,

We read the comment referring to the challenges in imaging the right ventricle with great interest [1]. The difficulties in distinguishing wall motion abnormalities in healthy subjects from those in diseased patients are very well summarised. The author cites the article by Doesch et al. [2] presenting 20 healthy subjects with CMR-derived measurement of the tricuspid annular plane systolic excursion (TAPSE) with a reference point outside the ventricle (TAPSEout), which might be used for screening right ventricular motion.

We could demonstrate TAPSE in cardiac magnetic resonance (CMR), being a fast and easily obtainable parameter correlating well to volumetric quantification of right ventricular ejection fraction (RVEF), with low interobserver and intraobserver variables. Therefore, we investigated 76 patients (age: 58 ± 17 years) with mean RVEF of 42 ± 14 %, assessed by the standardised slice-summation method. CMR-TAPSE was determined to be 19 ± 6 mm and correlated well in linear regression analysis with volumetric RVEF ($r = 0.72$, $p < 0.001$). However, we could also show that CMR-TAPSE is not only a fast tool in healthy subjects, but it also discriminates well between patients with impaired and normal RVEF. Multiplying CMR-TAPSE measurements by 2.5 leads to values close to the RVEF by volumetry. Furthermore, CMR-TAPSE correlates well with TAPSE determined using transthoracic echocardiography [3].

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Conflict of interest None declared.

References

1. Van der Wall EE. The right ventricle: always normal in normal subjects. Neth Heart J. 2015;23:62–3.
2. Doesch C, Zompolou C, Streitner F, et al. CMR-derived TAPSE measurement: a semi-quantitative method of right ventricular function assessment in patients with hypertrophic cardiomyopathy. Neth Heart J. 2014;22:557–64.
3. Speiser U, Hirschberger M, Pilz G, et al. Tricuspid annular plane systolic excursion assessed using MRI for semi-quantification of right ventricular ejection fraction. Br J Radiol. 2012;85:e716–21.

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